Response to Comments

on the

Proposed Watershed-Wide Waste Discharge Requirements

For Timber Harvesting Plan Activities Conducted By, Or On Land Owned By, The Green Diamond Resource Company In The South Fork Elk River Watershed

July 24, 2006

Note on Comments

Regional Water Board staff received comments on the proposed Order from two commenters: Ms Kristi Wrigley, on behalf of the Elk River Residents Association (ERRA); and Ms. Sharon E. Duggan, representing the Environmental Protection Information Center (EPIC).

Ms Duggan included a copy of comments submitted by Mr. Michael Liquori on August 8, 2005, on Pacific Lumber's Watershed-Wide Waste Discharge Requirements. However, most of the comments contained in Mr. Liquori's letter are not germane to this proposed Order. For example: this permit does not use the Empirical Landslide Reduction Model as an effluent limitation, but only uses it as one of the tools to evaluate the potential impact of GDRC's proposed timber harvesting activities; there is no HCP to cover GDRC's lands; nuisance flooding is not a significant issue in McCloud Creek and the South Fork Elk watershed, so the peak flow model and its associated wetness index and recovery trend curves were not utilized, and no dredging or infrastructure improvements are needed. However, staff has extracted those comments which could be considered to be germane, and included responses to those comments.

Index of Comments Received

Index No.	Name
1	Kristi Wrigley (ERRA)
2	Sharon E. Duggan (EPIC)
3	Michael Liquori

Comment 1
(Quoted from Index #1)
"I hope the planned average of 75 acres a year is not done in a year when Palco logging is at its quota. And that it is not done in such a manner as to have 300 acres of clear-cut in one season and none for another 4 years. 75 acres may not seem like a lot but at the present time there should be no logging until TMDLs are completed and a real value as to how much sediment the river can carry is formulated and then only that amount can be logged. Elk River can simply not carry off neither the sediment nor the increased water volume generated by logging."

Response
The three-year rolling average compliance measure, combined with the specific project constraint in this permit imposing a more stringent adjacency requirements than CDF

rules, will together address the commenter's concerns about large single-year impacts. (See Response to Comment #4 below.) The WWDRs currently under consideration are a near term solution for allowing Green Diamond Resource Company, or the Discharger) to discharge waste into the sediment impaired receiving waters of Elk River, until TMDLs can be established and implemented.

Comment 2
(Quoted from Index #1)
"The Green Diamond foresters should do a thorough evaluation beyond the CDF cookie cutter cheat sheet in the THP process to adequately address cumulative effects to the downstream residents. Bank failures downstream are not addressed by either this WWDR nor the THP process and the dangers those failures cause are very serious, undermining buildings and destroying property."

Response

Staff has no indication that bank failures are a significant source of sediment in McCloud Creek and South Fork Elk River. Control of cumulative effects are an expressed purpose of the WWDRs in this watershed, accomplished by limiting the number of acres to be logged annually, and by instituting special management prescriptions for the control and cleanup of sediment. Also, the South Fork Management Plan institutes far more sediment controls than are required under the Forest Practice Rules, and THPs to be enrolled under these WWDRs will receive significant scrutiny from staff.

Comment 3
(Quoted from Index #2)
"EPIC believes this distinction does not justify a failure to apply the Empirical Peak Flow Reduction Model to determine the receiving water limitation that corresponds to the enrollment of a maximum annual harvest in the South Fork Elk River."

Response
Because there in no record to support the incidence of nuisance flooding in this watershed, utilization of the Empirical Peak Flow Reduction Model Peak Flow Reduction Model (EPFRM, pr Peak Flow Model) was not necessary. The other WWDR in this watershed also contains no limit on peak flows. Should nuisance flooding become an issue in the South Fork Elk River, the permit can be reopened to address it. Section IV.B.2 states "If the Regional Water Board staff or the Discharger identifies and demonstrates a significant change in landslide patterns and sediment delivery rates in the South Fork Elk River watershed such that the receiving water limitation is exceeded, either the Discharger or the Executive Officer can request that this receiving water limitation be adjusted and these WDRs modified. Monitoring required in the Monitoring and Reporting Program associated with this Order (MRP No. R1-2006-0043) will inform the Discharger and Regional Water Board staff of changes in landslide patterns and

sediment delivery rates. Any revision to this receiving water limitation shall not occur more frequently than on an annual basis and must be approved by the Regional Water Board and be subject to public review."

Comment 4
(Quoted from Index #2)
"EPIC is concerned that the WWDRs as written allow Green Diamond to harvest 750 acres at any time between now and 2015."

Response
Due to adjacency constraints and clearcut size limitations contained in the Forest Practice Rules (FPRs), the amount of acres that CDF would be able to annually approve for GDRC is limited. In addition, in the South Fork Management Plan which is part of the WWDRs, GDRC states "GDRCo will adhere to a six year harvest adjacency versus the three year adjacency requirement in the California FPRs. This extension of the harvest adjacency in this watershed will serve to further reduce potential impacts from harvest activities and will distribute them over greater time and space." Section IV.B.1 of the WWDRs states that "The Discharger's activities will be presumed to be compliant with this receiving water limitation so long as harvest activities remain within the parameters set out in the Discharger's report of waste discharge [ROWD]. Compliance will be evaluated based on a three-year rolling average of acres harvested [emphasis added]." This combination of limitations results in GDRC only being able to annually harvest an average of 75 acres in the next ten years.

Comment 5
(Quoted from Index #2)
"To understand what receiving water limitations from runoff and associated discharges of waste, the Empirical Peak Flow Reduction Model ("Peak Flow Model") must be run with calculations that include Pacific Lumber's harvest, and the Green Diamond 750 acre maximum the proposed WWDRs authorize."

Response
Staff utilized both the Peak Flow model in their analysis of the impacts from GDRC's proposed operations, and the result shows that the channel capacity is sufficient to pass stormflows without causing nuisance flooding. Modeling the bankfull event (1.5 years) and including GDRC's harvest with Pacific Lumber's shows that increases in peak flow will be below the thresholds that we have set for Waste Discharge Requirements in this watershed.

Comment 6
(Quoted from Index #2)
"Additionally, the Empirical Harvest- Related Landslide Sediment Delivery Reduction Model (Landslide Reduction Model) should run using calculations for Pacific Lumber's management in conjunction with Green Diamond's management activities. The existing

conditions in the watershed cannot be ignored. Nor can Green Diamond's operations be evaluated without express consideration of Pacific Lumber's management activities."

Response
The Empirical Harvest-Related Landslide Sediment Delivery Reduction Model (Landslide Reduction Model) was run on the entire South Fork Elk watershed, encompassing both Palco and GDRC lands. Thus, each was evaluated with full consideration of the other's activities. The Landslide Model was also run using various cutting scenarios for GDRC.

Comment 7
(Quoted from Index #3)
"We would like to see the monitoring strategies be more closely tied to specific performance measures and resource targets following a more integrated adaptive management approach. The structure of the monitoring strategy should be based on a well-considered scientific set of testable hypotheses based on the strategies outlined in the Watershed Wide Waste Discharge Requirements. Data collected under the monitoring program should be clearly tied to specific monitoring objectives and hypotheses." The components of such a plan should include Hypotheses Statements, Resource Targets, Performance Measures, Compliance Monitoring, Validation Monitoring, and Effectiveness Monitoring. "We recommend that the monitoring program be carefully designed around these principles, and that specific measurement protocols and standards be developed to implement the monitoring program. The protocols and standards should be grounded in quality scientific methodologies that receive the full rigor of scientific peer review, and the outcome of monitoring should be in the form of specific implications for each considered management and/or policy alternative."
Response
Staff believe that, as proposed, the monitoring conducted under the provisions of the WWDRs and the MRP will be able to monitor compliance with the provisions of the WWDRs, evaluate the effectiveness of the WWDR provisions, and allow for future refinements based upon any changes in the watershed conditions and improved understanding of the extent of the sediment depositions, hydraulic conditions, and the ability of the system to transport sediment.

Comment 8:
(Quoted from Index #3)
"We have several concerns about [the Landslide Reduction Model's] viability as a long-term solution, as the Model includes a number of simplifying assumptions that do not appropriately account for the dynamics associated with sediment production in forested landscapes. We believe that over the long-term, development of Total Maximum Daily Load allocations for these watersheds will be critical to establishing the appropriate level of detailed hydro-geomorphic modeling necessary to address these complex landscape dynamics."

Response:
Comment noted. The WWDRs are a near term solution for allowing GDRC to discharge waste into the sediment-impaired receiving waters of Elk River until Total Maximum Daily Loads (TMDLs) can be established and implemented. The receiving water limitations in the WWDRs have been designed with a margin of safety to address cumulative impacts and to reasonably allow for watershed recovery while the WWDRs are in place.